

ABSTRACT

The present invention provides a novel fluorescent material which has a luminance higher than that of the conventional rare earth ion-dispersed fluorescent materials and is excellent in light resistance and long-term stability, and also an optical device, such as a high-luminance display panel or lighting equipment, which uses such a fluorescent material. Semiconductor ultrafine particles are characterized by maintaining 50% or more fluorescence quantum yield of photoluminescence when they are kept dispersed in water at 10°C to 20°C in air for 5 days. The fluorescent material is obtained by dispersing such semiconductor ultrafine particles in a glass matrix using a sol-gel process.